UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/642,223	08/18/2003	Kazuyuki Inokuma	60188-582	2209

7590   11/24/2006

Jack Q. Lever, Jr.
McDERMOTT, WILL & EMERY
600 Thirteenth Street, N.W.
Washington, DC 20005-3096

EXAMINER
RAO, ANAND SHASHIKANT

ART UNIT	PAPER NUMBER
2621	

DATE MAILED: 11/24/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.	Applicant(s)
Office Action Summary	10/642,223	INOKUMA, KAZUYUKI
	Examiner	Art Unit
	Andy S. Rao	2621

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____ .

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☒ All   b)☐ Some * c)☐ None of:

        1.☒ Certified copies of the priority documents have been received.

        2.☐ Certified copies of the priority documents have been received in Application No. _____ .

        3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date <u>8/18/03</u>.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____ .

DETAILED ACTION

Specification

1.   The lengthy specification has not been checked to the extent necessary to determine the

presence of all possible minor errors. Applicant's cooperation is requested in correcting any

errors of which applicant may become aware in the specification.

Claim Rejections - 35 USC § 102

2.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the

basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3.   Claims 1-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Tiwari et al.,

(hereinafter referred to as "Tiwari").

Tiwari discloses picture coding method for coding a moving picture image, comprising: a

first step of generating, with respect to a first image, a plurality of coded data respectively having

different coding quantities (Tiwari: column 8, lines 30-40); a second step of creating a plurality

of reference images to be used for predicting coding by decoding said plurality of coded data

(Tiwari: column 9, lines 1-15); a third step of performing image quality evaluation on said

plurality of reference images (Tiwari: column 8, lines 45-60); and a fourth step of selecting at

least one coded data from said plurality of coded data on the basis of a result of the image quality

evaluation (Tiwari: column 11, lines 1-12), as in claim 1.

Regarding claims 2-3, Tiwari discloses wherein, in the first step, a plurality of target

coding quantities are set, and said plurality of coded data are generated with respect to said first

image, through coding performed under coding quantity control for converging coding quantities

of said plurality of coded data respectively on said plurality of target coding quantities (Tiwari:

column 5, lines 10-35), as in the claims.

Regarding claim 4, Tiwari discloses wherein, in the first step, said plurality of coded data

are generated with respect to said first image, through coding performed by using a plurality of

different coding parameters (Tiwari: column 10, lines 23-60), as in the claim.

Regarding claim 5, Tiwari discloses wherein said first image is provided frame by frame,

and said at least one coded data is selected in each frame in the fourth step (Tiwari: column 9,

lines 30-55), as in the claim.

Regarding claims 6-7, Tiwari discloses wherein said first image is provided frame by

frame, in the first step, n (wherein n is an integer of 2 or more) predicting coded images are

created (, with respect to said first image, by referring to n reference images of another frame,

and with respect to each of said n predicting coded images, m (wherein m is an integer of 2 or

more) coded data respectively having different coding quantities are generated, whereby

generating n x m coded data as said plurality of coded data (Tiwari: column 9, lines 35-45), as in

the claims.

Regarding claims 8-11, Tiwari discloses wherein, in the third step, a reference image

obtained from coded data having the largest coding quantity among said plurality of reference

images is set as a referred image, and a difference of each of said reference images from said

referred image is obtained and used for obtaining an evaluation value for the image quality

evaluation (Tiwari: column 8, lines 30-55), as in the claims.

Regarding claims 12-13, Tiwari discloses wherein, in the third step, the image quality

evaluation of said reference images is performed in each macroblock, and in the fourth step, said

at least one coded data is selected in each macroblock, and said coded data selected in respective

macroblocks are combined to reconstruct new coded data (Tiwari: column 10, lines 30-47), as in

the claims.

Regarding claim 14, Tiwari discloses wherein said first image is provided frame by

frame, in the first step, inter-coding and intra-coding are performed with respect to said first

image, and in the fourth step, either of the inter-coding or the intra-coding is selected (Tiwari:

column 4, lines 40-65), as in the claim.

Regarding claims 15-17, Tiwari discloses wherein, in the fourth step, said at least one

coded data is selected on the basis of not only the result of the image quality evaluation but also

coding quantities of said plurality of coded data (Tiwari: column 8, lines 50-60), as in the claims.

Tiwari discloses a picture coding apparatus (Tiwari: figures 3-5) comprising: a picture

coding unit for generating, with respect to a first image, a plurality of coded data respectively

having different coding quantities (Tiwari: column 8, lines 15-45)); a local decoding unit for

generating a plurality of reference images to be used for predicting coding by locally decoding

said plurality of coded data generated by said picture coding unit (Tiwari: column 8, lines 35-

45); an image quality evaluation section for evaluating image qualities of said plurality of

reference images generated by said local decoding unit (Tiwari: column 8, lines 45-55); and a

coded data selection section for selecting at least one coded data from said plurality of coded

data on the basis of a result of processing executed by said image quality evaluation section

(Tiwari: column 9, lines 1-45), as in claim 18.

Regarding claim 19, Tiwari discloses a first storage section for storing said plurality of

coded data; and a second storage section for storing said plurality of reference images, wherein

said first storage section and said second storage section are constructed by a common memory

device (Tiwari: column 9, lines 1-15), as in the claim.

Regarding claim 20, Tiwari discloses wherein said picture coding unit and said local

decoding unit are operated in a time-sharing manner for generating combinations of said

plurality of coded data and said plurality of reference images serially in time series (Tiwari:

column 10, lines 15-25), as in the claim.

Conclusion

4.   The prior art made of record and not relied upon is considered pertinent to applicant's

disclosure. Rajagopalan discloses a two pass encoding method.

5.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Andy S. Rao whose telephone number is (571)-272-7337. The

examiner can normally be reached on Monday-Friday 8 hours.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Mehrdad Dastouri can be reached on (571)-272-7418. The fax phone number for the

organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would

like assistance from a USPTO Customer Service Representative or access to the automated

information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Andy S. Rao
Primary Examiner
Art Unit 2621

asr
November 20, 2006

ANDY RAO
PRIMARY EXAMINER